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ABSTRACT

The effects of ethnicity, gender, and risk on locus of control were investigated for gifted children and for high ability nongifted children. Subjects (n=805) in grades 5 through 7 were African-American, Caucasian, Latino/Hispanic, or Fillipino and had been referred for evaluation of giftedness, which included evaluation of intellectual ability and six risk factors: (1) environmental risk, (2) economic risk, (3) language risk, (4) cultural risk, (5) emotional risk, and (6) health risks. Analysis of variance revealed significant main effects for giftedness, ethnic background, and level of risk, as well as a significant ethnic X risk interaction. In addition, a gender X giftedness X ethnic background analysis of variance yielded a significant main effect for gender. Overall, higher internal locus of control was associated with female Caucasians not at risk. However, in contrast to Caucasians, greater risk was associated with a higher internal locus of control in non-Caucasians. Results confirmed previous findings in showing a more internal locus of control in gifted children, and further indicate that, for gifted and intellectually bright non-Caucasians, risk is associated with, and may serve to strengthen, a greater internal locus of control. Results support the use of locus of control as an alternative in identifying gifted traditionally underrepresented groups such as African-Americans and Latino/Hispanics. (DB)

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CHAPTER 5

Ethnic and Gender Differences in Locus of Control in At Risk Gifted and Nongifted Children

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Abstract

The effect of ethnicity, gender, and risk on locus of control were investigated for gifted children and for high ability nongifted children. Eight hundred and five 5th through 7th grade African-American, Caucasians, Latino/Hispanic and Filipino children who had been referred for an evaluation of giftedness were evaluated in a case study analysis that included an evaluation of intellectual ability and the presence of one or more of six risk factors. Each child was given the Nowicki Strickland Locus of Control Scale for Children. A 2(Gifted vs. NonGifted) X 4(Ethnic Background) X 4(Level of Risk) ANOVA revealed significant ($p < .01$) main effects for Giftedness, Ethnic Background, and Level of Risk, as well as a significant Ethnic X Risk Interaction ($p < .038$). In addition, a 2(Gender) X 2(Giftedness) X 4(Ethnic Background) ANOVA yielded a significant ($p < .024$) main effect for Gender. Overall, higher internal locus of control was associated with female Caucasians not at risk. However, in contrast to Caucasians, greater risk was associated with a higher internal locus of control in nonCaucasians. Results confirm previous findings in showing a more internal locus of control in gifted children, and further indicate that for gifted and intellectually bright nonCaucasians, risk is associated with, and may serve to strengthen, a greater internal locus of control. Results support the use of locus of control as an alternative in identifying gifted traditionally underrepresented groups such as African-Americans and Latino/Hispanics.

Ethnic and Gender Differences in Locus of Control for Gifted and Nongifted Children With and Without Risk

Locus of control is a theoretical construct referring to the degree to which a person perceives a relationship between his or her own behaviors and the outcomes of those actions (Rotter, 1966). The most widely used instrument to measure locus of control is the Internal-External Scale developed by Rotter (1966). According to Rotter's theory, a person who assumes control and responsibility for the events in his or her life is said to have an internal locus of control. When a person attributes responsibility to outside sources, such as chance, luck or fate, he or she is said to have an external locus of control. Investigators have found that students who attribute their successes to their own efforts and abilities and their failures to a lack of effort will probably attempt a failed task again. Those students who attribute their successes to luck and their failures to lack of ability, however, are less likely to re-attempt a failed task (Payne & Payne, 1989; Weiner, 1977).

In examining several locus of control studies, Rotter found strong support for the hypothesis that individuals who have a strong belief that they can control their own destinies are likely to a) be more aware of environmental factors that may influence future behavior; b) take steps to improve environmental conditions; c) place greater value on skill or achievement reinforcement; and d) be resistive to conformity and other subtle attempts to influence their behavior (see Rotter, 1966). In a review of the literature on the locus of control variable, Lefcourt (1976) found that individuals with an internal rather than external locus of control were more perceptive, inquisitive and efficient in processing information.

One of the main criticisms of Rotter's Internal-External Scale is that it is not suitable for children. Nowicki and Strickland have developed a measure to extend the investigation of the locus of control variable to children (Nowicki & Strickland, 1973). This measure has been used to examine several dimensions of child behavior. Empirical findings have revealed that locus of control becomes more internal with age (Nowicki & Strickland, 1973; Brown et al., 1984). As children grow older, more is expected of them and they are given an opportunity to succeed; thus, their perceptions of their ability to control their academic progress will become more internal (Payne & Payne, 1989). Internality has also been associated with higher social class and ethnicity, with middle class whites being most internal (Nowicki & Strickland, 1973; Crandall, Katkovsky & Crandall, 1965).

An extensive body of research has explored the relationship between locus of control and achievement. Nowicki and Strickland (1973) found a negative relationship between the locus of control and achievement of children in grades 3 through 12. As achievement scores went up, external scores went down; the children became more internal. This was particularly true for males. Gordon (1977) studied 113 fourth grade children and found that academic achievement, as measured by grades or achievement tests scores, could be predicted by knowing a child's locus of control score. Crandall, Katkovsky and Crandall (1965) measured locus of control with the IAR (Intellectual Achievement Response) Questionnaire, which is a measure aimed at assessing children's beliefs in reinforcement responsibility exclusively in intellectual academic situations. They reported that a higher internality score on the IAR was positively correlated with at least two measures of academic achievement.

Locus of control has been used to assess different populations. Fincham and Barling (1978), for example, found significant differences in locus of control between learning disabled, normal achieving and gifted children, with learning disabled being the most externally oriented and gifted children the least externally oriented. Gifted children have been identified as having a greater internal locus of control than nongifted children (Delisle & Renzulli, 1982; McClelland, Yewchuk, & Mulcahy, 1991). Laffoon, Jenkins-Friedman, and Tollefson (1989) looked at 137 achieving gifted, underachieving gifted and nongifted students in third, fourth and fifth grades. Their results indicated that gifted underachievers and nongifted students were significantly more external than achieving gifted students. They also found that the underachieving gifted and nongifted students made significantly more luck attributions for their failures.

Recently, an area of increasing interest has been in ethnic differences in locus of control (Chiu, 1986). Hsieh, Shybut and Lotsof (1969), for example, studied Anglo-American, American Chinese and Hong Kong students. Their findings suggested that cultural orientation may be closely related to a personal belief in internal versus external control. Individuals raised in a culture that values independence, uniqueness, self-reliant individualism, and personal output of energy are likely to be more internally oriented than individuals from a culture that tends to emphasize a different set of values. Hsieh et al. (1969) also found Anglo-Americans to be more internally oriented than Chinese Americans who were, in turn, more internally oriented than Hong Kong Chinese, suggesting the importance of the role that cultural context plays in the socialization process. In another study of culture and locus of control, Battle and Rotter (1963) compared 80 black and white sixth and eighth graders. These investigators found middle class whites to be the most internal and lower class blacks to be the most external. Similar findings have been shown in other studies (Nowicki & Strickland, 1973; Gurin, Gurin, Lao & Beattie, 1969; Brown, Fulkerson, Fur, Ware & Voight, 1984). Studies of motivation and performance of black students suggest that blacks are less likely to hold strong beliefs of internal control and that social class and race probably interact so that lower class blacks stand out as externally oriented.

In an attempt to explain differences in locus of control, Payne and Payne (1989) hypothesized that at-risk children will have a more external locus of control than children not considered at risk. The presence of certain external variables such as low socioeconomic status makes a child at risk. In a study of 643 black and white students classified as either at-risk or not-at-risk, Payne and Payne (1969) found that at-risk students had a significantly greater tendency to attribute their achievement and life experiences to external forces and influences. In contrast to other investigators, however, Payne and Payne found no main effect of locus of control for race. Browne and Rife (1991) also looked at locus of control orientation of at-risk and not-at-risk sixth grade students. They defined at-risk in terms of the following variables: previous grade failures and retentions, attendance, prior disciplinary actions, family income, and number of parents in the family. They found that students at risk tended to have a more external locus of control. Studies of risk are limited, however, in that there is a lack of consistency in the definitions of at-risk children. In addition, previous studies have failed to consider the amount of risk and level of cognitive ability for each child.

The literature shows that there is a positive relationship between locus of control and academic achievement. To date, however, no one has studied the effects of risk, ethnicity, cognitive ability and gender on the locus of control of children. The present study attempted to fill this gap in the literature. We examined the locus of control scores of children with no risk factors, one risk factor, two risk factors and three or more risk factors, as described below, to determine the effect of the presence of different levels of risk on locus of control. Furthermore, we compared gifted and nongifted children across several ethnic categories. Finally, we considered the role of gender.

Method

Subjects:

The subjects consisted of 805 fifth through seventh grade students who had been referred for an evaluation of giftedness and whose parent provided informed consent to include the Locus of Control Scale as an experimental test whose results would not be used in determining giftedness. Of these, 190 were Latino/Hispanic, 341 Caucasian, 155 African-American, and 119 Filipino; 435 were female, 370 male.

Procedure:

Each child was evaluated for giftedness in a case study evaluation by a school psychologist. The case study considered scores on tests of intelligence and achievement. In addition, each child was evaluated for the presence of risk factors. A risk factor was operationalized as the presence of one or

more of the following six variables: environmental, economic, language, culture, social/emotional and health. Environmental risk included transiency (three or more changes in schools) and excessive absence from school because of home responsibilities such as child care duties or working to help support the family. Economic risk included parental unemployment or low income. Language risk included speaking English as a second language and lack of fluency in English. Cultural risk included cultural values and beliefs that differ from those of the dominant culture or limited experience in the dominant culture. Emotional risk encompassed such factors as death of a parent, child abuse, major psychiatric illness in the home, or extended absence of the parent because of military service. Health factors included vision, speech, and hearing deficits that required designated instructional service; motor problems that required adaptive physical education; or diseases that caused absences or hampered school progress, such as asthma or diabetes. Of the subjects, 85 had no risk factors, 114 had one risk factor, 236 had two risk factors, 370 had 3 or more risk factors.

At the time of their evaluation for giftedness, each child was given the Nowicki Strickland Internal External Locus of Control Scale for Children (NSLOCS). The NSLOCS is a 40 item paper and pencil instrument in which the child answers "YES" or "NO" to such questions as "Do you believe that most problems will solve themselves if you just don't fool with them?" and "Do you believe that whether or not people like you depends on how you act?". A high score on the NSLOCS indicates externality. Nowicki and Strickland have reported internal reliability coefficients ranging from .68 to .81. The NSLOCS has also been found to correlate with other measures of locus of control such as the Rotter I-E Scale (Rotter, 1966) and the Bialer-Cromwell Scale (Bialer, 1961).

Data on Locus of Control were not made available to the school psychologist who conducted the giftedness evaluation. The psychologists used objective test results to determine giftedness. All children who obtained an IQ score two standard deviations above the mean on a standardized test of intelligence such as the Wechsler Intelligence Scale for Children-Revised (WISC-R) were automatically certified for the gifted program. In addition, children with two or more risk factors who obtained an IQ score of 120 or greater were certified as gifted. For the purposes of the present analysis, only those children who scored two standard deviations above the mean on a standardized individual intelligence test were included as "gifted." Of the total sample, 364 met the criterion. Of these, 131 were Latino/Hispanic, 147 were Caucasian, 24 were African-American, and 62 were Filipino.

Results

To examine risk factors and possible interactions of risk with giftedness and ethnicity, the data were analyzed in a 2(Giftedness: Gifted vs. NonGifted) X 4(Ethnic Background: Latino/Hispanic, Caucasian, African-American, Filipino) X 4(Level of Risk: 0, 1, 3, risk factors) ANOVA. There were significant main effects for Giftedness, $F_{(1,804)} = 8.31$, $p < .004$, Ethnic Background, $F_{(3, 804)} = 6.29$, $p < .001$, and Level of Risk, $F_{(3,804)} = 2.84$, $p < .037$. Also significant was the Ethnic X Risk Interaction, $F_{(9, 804)} = 1.99$, $p < .038$.

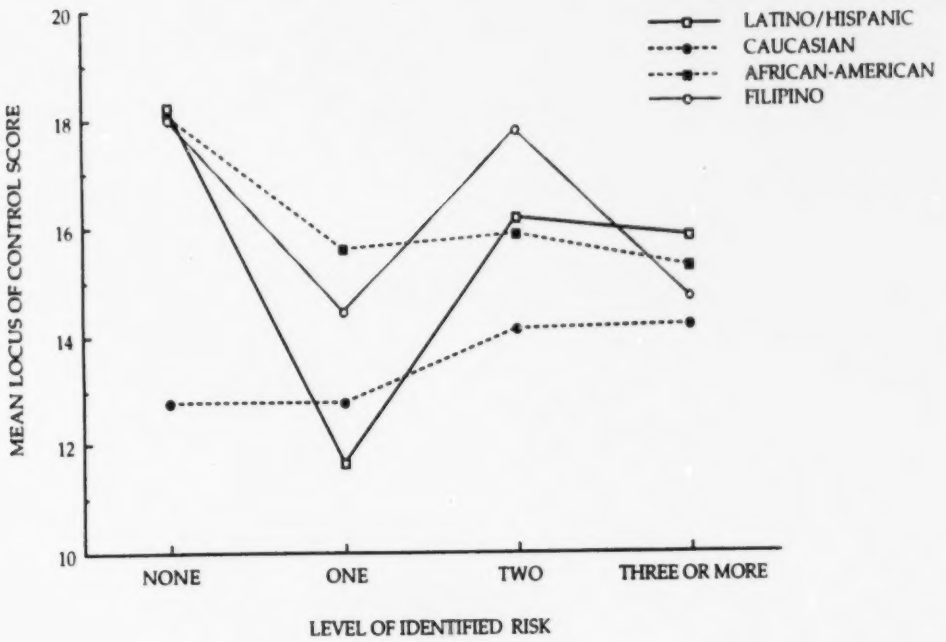
The main effect for Ethnic Background showed that the Caucasian children ($M = 13.74$, $SD = 4.57$) had a significantly more internal locus of control than the Filipino children ($M = 14.73$, $SD = 4.37$), who, in turn, were significantly more internal than Latino ($M = 15.54$, $SD = 4.96$) and African-American children ($M = 15.90$, $SD = 4.40$).

The main effect for risk showed that children with two ($M = 15.27$, $SD = 4.86$) and three or more risk factors ($M = 15.01$, $SD = 4.49$) had a significantly more external locus of control than children with only one risk factor ($M = 13.42$, $SD = 4.56$) indicating that, summing across the other variables, the more risk factors a child has, the more likely he or she will be to attribute successes to external causes.

Figure 1 illustrates the Ethnic Background by Level of Risk Interaction. For the Caucasians, having no risk factors was associated with a higher internal locus of control, and the children became more external as risk level increased. For the other three groups, with the exception of one data point

(Latino/Hispanic with one risk factor), the reverse was found. That is, for these nonCaucasians, greater risk was associated with a higher internal locus.

Figure 1. Locus of control as a function of risk and ethnic background



To evaluate gender effects and possible interactions among gender, giftedness, and ethnic background, the data were evaluated in a 2(Gender) X 2(Giftedness) X 4(Ethnic Background) ANOVA. As with the previous ANOVA, there were significant main effects for Giftedness and Ethnic Background. The main effect for Gender was also significant, $F_{(1, 804)} = 5.15, p < .024$. This effect was due to a higher internal locus in the females ($M = 14.40$, $SD = 4.65$) compared to the males ($M = 15.23$, $SD = 4.67$).

Discussion

The results revealed that, overall, gifted children have a more internal locus of control than nongifted children. This result is not surprising, and is consistent with findings from Laffoon, Jenkins-Friedman, & Tollefson (1989). Laffoon et al. (1989) found that high achieving gifted students had a significantly higher internal locus of control than both underachieving gifted and nongifted students. Other studies have also found internal locus of control to be related to giftedness (Fincham & Barling, 1987) and achievement (Keith et al., 1986; Harty et al., 1984).

There were also ethnic differences in locus of control. The results of the present study revealed that Caucasian children have a more internal locus of control than Filipino, Latino, and African-American children. These findings are consistent with Hsieh et al. (1969), who found Anglo-American students to have a more internal locus of control than other ethnic groups. These findings suggest that cultural orientation may be closely linked to an individual's belief in external or internal control. As Hsieh et al. (1969) suggest, an individual who is raised in a culture that emphasizes independence, self-reliance, and individuation will typically develop a more internal locus of control than individuals who are raised with a different set of values. This is an important finding considering the positive relationship between internal locus of control and achievement. If children, and specifically traditionally

underrepresented or disadvantaged children, are underachieving in school, one possible area on which to focus may be increasing the child's internal locus of control. The discrepancies in intelligence and achievement scores may be due to differences in socialization processes as opposed to deficits in intellectual abilities.

Level of risk also affected locus of control. Overall, children with two or more risk factors had a significantly more external locus of control than children with none or only one risk factor. Browne & Rife (1991) and Payne & Payne (1989) also found that at-risk students tended to ascribe their achievements and successes to outside, "external" causes. A child is generally considered at-risk if specific circumstances in the child's life affect his or her ability to perform at full potential. The child typically has little or no control over these variables. Language and cultural factors, for example, may influence a child's ability to perform in school, yet the child has no control over what culture into which he or she is born. It follows that the presence of multiple risk factors may lead the child to feel that he or she has little control over his or her environment and thus, develop an external locus of control.

Findings with level of risk must be considered in conjunction with ethnic background, as there was a significant interaction between risk and ethnic background. This interaction indicated that for nonCaucasians the presence of risk factors was actually associated with a greater internal locus of control. Perhaps these children respond to adversity by becoming more internal. In any case, there was a clear association between risk and internal locus of control for gifted nonCaucasians. Whether these results generalize to children of average or below average ability, however, remains to be seen, and would seem unlikely based on previous studies (Brown & Rife, 1991; Payne & Payne, 1989). Thus, a high internal locus may serve as a marker for at risk gifted nonCaucasians.

There were also gender effects in locus of control. Females showed a slight but significantly greater internal locus of control. These results are consistent with Young and Shorr (1986) and Cooper et al. (1981), who found that females tended to attribute both success and failure outcomes to internal causes significantly more often than males. This difference may be a result of differences in socialization of girls and boys. However, several other studies have failed to find any differences in locus of control between males and females (Payne & Payne, 1989; Browne & Rife, 1991; Brown et al., 1984). Furthermore, while the differences in locus of control for the present study were significant, in general all subjects in this gifted and high ability sample tended to be more internal. More research is needed in order to determine the extent of differences in locus of control for males and females of average or below average abilities.

In general, our results further support the conclusion that internal locus of control is positively related to academic success, including identification for gifted programs. In addition, female students were found to be more internal than male students. Several factors have been identified that appear to influence an individual's locus of control. One factor that may lead to a more external locus of control is cultural orientation. The extent to which a culture believes in independence and self-reliance will possibly effect the degree to which a person perceives control over his or her successes and failures. A second variable that appears to affect internal versus external locus of control is the number of risk factors attributed to the individual. It appears that the more risk factors a child has, the less internal control the child perceives. However, the effects of number of risk factors must be looked at in conjunction with ethnicity and IQ. The results of the present study suggest that for high IQ scoring nonCaucasians the presence of multiple risk factors may actually serve to increase internal locus of control. Thus, locus of control has multiple determinants and interacts with risk and ethnicity.

Future work in this area should be directed at examining, more specifically, how measures of locus of control might be used to produce equity in selecting diverse children for gifted programs. In the present study locus of control was used as an experimental tool. Scores on locus of control were not used for selection purposes. Certainly such measures have shown promise and merit further investigation.